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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/580,120

09/11/2006

Frank Henglein

P/746-4

7418

2352 7590 04/16/2007
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EXAMINER

MATTHEWS, ABRAHAM M

ART UNIT

PAPER NUMBER

1755

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

04/16/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/580,120

Applicant(s)

HENGLEIN ET AL.

Examiner

Abraham M. Matthews

Art Unit

1755

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 September 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-41 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-41 is/are rejected.
- 7) ☒ Claim(s) 4 and 7-41 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 5/19/2006.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

Claims 4, and 8-40 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim shall not serve as a basis for any other multiple dependent claim.. See MPEP § 608.01(n).

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 41 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 41 is a dependent claim which recites: "The coating composition according to claim 41,..", and has no basis claim for dependency, which renders said claim 41 indefinite.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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Claims 1-41 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent No. 5,624,486 to Schmid et al.

Regarding Applicants' claim 1, Schmid et al disclose novel luster pigments based on multiply coated platelet-shaped metallic substrates comprising, (A) a first layer consisting essentially of silicon oxide, silicon oxide hydrate, aluminum oxide and/or aluminum oxide hydrate, (B) a second layer consisting essentially of metal and/or nonselectively absorbing metal oxide, and (C) if desired, a third layer consisting essentially of colorless or selectively absorbing metal oxide, obtained by wet-chemical process oxidation of said luster pigments (Schmid et al., column 1, lines 4-41). Schmid et al also disclose that examples of suitable substrates for said luster or effect pigments are in particular aluminum and its alloys such as aluminum bronze (Schmid et al., column 3, lines 33-37). Schmid et al also further disclose that the weight ratio of the metallic pigment can be varied within the range from 1:99 to 99:1 (Schmid et al., column 5, lines 57-59). Schmid et al also teach that said luster pigments exhibit in the second layer (layer (B) above) a strongly absorbing, highly refractive materials such as molybdenum or chromium, refractive index of which is >1.95 (Schmid et al., column 4, lines 46-48). Schmid et al. also further disclose that the first layer (A) is composed of aluminum oxide, aluminum oxide hydrate and preferably silicon oxide and also of mixtures thereof (Schmid et al., column 4, lines 6-8), i.e., a mixed layer exists between the highly refractive metal chalcogenide layer and the aluminum oxide and/or aluminum oxide hydrate containing layer.

It should be noted that Applicants define chalcogenides as including oxides (See page 6, lines 6-9 of the specification).

The recitations of Applicants' claims 2-10, can be found in the above reference at column 4, lines 16-19, and column 4, lines 6-8 (claims 2,4,9); column 4, lines 9-10 (claim 3); column 1, lines 7-9, and column 5, lines 9-13 (claims 5,10); column 4, lines 6-8 (claim 6); column 4, lines 9-10 (claim 7); column 4, lines 9-10, and lines 44-45 (claim 8).

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The recitations of Applicants' claims 11-21, and 24-27 can be found in the above reference at column 3, line 67 to column 4 line 1 (claims 11,12); column 4, lines 26-43, and lines 51-57 (claims 13-18); column 5, lines 9-14 (claims 19-21); column 6, lines 3-15 (claim 24); column 4, lines 22-25 (claim 25); column 4, lines 26-33, and lines 51-57 (claim 26); column 5, lines 59-61, and column 3, lines 33-37 (claim 27).

The recitations of Applicants' claims 37-41 can be found in Schmid et al. at column 1, lines 51-54, column 4, lines 28-32, and column 8, lines 42-49.

Regarding Applicants' claims 22 and 23, Schmid et al., as applied to claim 1 above, disclose novel luster pigments based on multiply coated platelet-shaped metallic substrates. Schmid et al, however, do not specifically disclose said luster pigments, characterized in that they possess a form factor of more than 20 and preferably more than 25, as set forth in claim 22, and a form factor of more than 40, as set forth in claim 23. Nonetheless, Schmid et al. disclose the average diameters and average thicknesses of the pigment substrate particles as: from about 1 to 200 μm , in particular from about 5 to 100 μm (for average diameters), and from about 0.1 to 5 μm , in particular around about 0.5 μm (for average thicknesses) (Schmid et al., column 3, line 65 to column 4, line 1). Since a form factor for a pigment is the ratio of mean particle diameter to mean particle thickness, calculation of form factors using the above average diameter and average thickness values disclosed renders a teaching of Applicants' recitations of claims 22 and 23 by inherency (MPEP 2112).

Regarding Applicants' claim 28, Schmid et al., as applied to claim 1 above, disclose novel luster pigments based on multiply coated platelet-shaped metallic substrates. Schmidt et al also disclose a process for the production of said luster or effect pigments and pigment mixtures characterized by subjecting the metallic substrate particles to : (a) wet chemical coating with silicon oxide, aluminum oxide and/or aluminum oxide hydrate by hydrolytic decomposition of organic silicon and/or aluminum compounds in which the organic radicals are attached to the metals via

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oxygen atoms in the presence of an organic solvent in which the metal compounds are soluble with or without subsequent drying, and then, (b) further coating of the particles obtained in step (a) by applying at least one layer of a strongly absorbing, highly refractive material (i.e., chalcogenide material) (with refractive index > 1.95), wherein a mixed layer is formed between the highly absorbing material layer and the aluminum oxide and/or aluminum oxide hydrate layer (Schmid et al., column 2, line 54 to column 3, line 12; column 5, lines 9-15; Examples 1-12).

The recitations of Applicants' claims 29-36 can be found in the above reference at column 5, lines 9-15; column 6, lines 9-63, and Examples 1-12).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Abraham M. Matthews whose telephone number is (571) 272-2495. The examiner can normally be reached on M-F 8:00 -4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on (571) 272-1233. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AMM



DAVID SAMPLE
PRIMARY EXAMINER